STIC-Biotech/ChemLib 93005

From: Chan, Christina
Sent: Wednesday, August 16, 2000 4:35 PM
To: STIC-Biotech/ChemLib
Cc: Lee, Li
Subject: FW: rush search

Importance: High

Please rush. Thanks Chris

Chris Chan
TC 1600 New Hire Training Coordinator and SPE, 1644
CM 1, Room 9B19
308-3973

-----Original Message-----
From: Lee, Li
Sent: Wednesday, August 16, 2000 11:55 AM
To: Chan, Christina
Subject: rush search

Please approve the rush seq search (it's a amendment) below:

09/235,416

1. SEQ ID NO:1
2. interference

Thanks.

Li Lee
Patent Examiner
Art Unit 1645
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SEARCH REQUEST FORM 93005

Scientific and Technical Information Center

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Art Unit: _____ Phone Number 30_____ Serial Number: _____
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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

_____

Earliest Priority Filing Date: _____

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STAFF USE ONLY	Type of Search	Vendors and cost where applicable
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Date Completed: 8/18/00	Litigation _____	Lexis/Nexis_____
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Clerical Prep Time: 3 min + 4 min	Patent Family _____	WWW/Internet_____
Online Time: 48 min 8/21 + 3 min 8/21	Other _____	Other (specify)_____

PTO-1590 (1-2000)

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Left, right, and simultaneous left and right truncation are available in the Basic Index. See HELP SFIELDS for details.

THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE SUBSTANCE IDENTIFICATION.

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=> s thermomyces languginosus

            56 THERMOMYCES
             0 LANGUGINOSUS
L1           0 THERMOMYCES LANGUGINOSUS
                 (THERMOMYCES(W)LANGUGINOSUS)

=> s thermomyces lanuginosus

            56 THERMOMYCES
            49 LANUGINOSUS
L2          48 THERMOMYCES LANUGINOSUS
                 (THERMOMYCES(W)LANUGINOSUS)

=> s (unc 104 or kinesin) and l2

           769 UNC
         16707 104
            14 UNC 104
                 (UNC(W)104)
          1206 KINESIN
L3           1 (UNC 104 OR KINESIN) AND L2

=> d l3 bib ab

L3   ANSWER 1 OF 1  MEDLINE
AN   2000095847     MEDLINE
DN   20095847
TI   Cloning and expression of kinesins from the thermophilic fungus
     Thermomyces lanuginosus.
AU   Sakowicz R; Farlow S; Goldstein L S
CS   Howard Hughes Medical Institute, Department of Cellular and Molecular
     Medicine, School of Medicine, University of California, San Diego, La
     Jolla 92093-0683, USA.
NC   GM35252 (NIGMS)
SO   PROTEIN SCIENCE, (1999 Dec) 8 (12) 2705-10.
     Journal code: BNW. ISSN: 0961-8368.
CY   United States
DT   Journal; Article; (JOURNAL ARTICLE)
LA   English
FS   Priority Journals
EM   200004
EW   20000403
AB   The motor domain regions of three novel members of the kinesin
     superfamily TLKIF1, TLKIFC, and TLBIMC were identified in a thermophilic
     fungus Thermomyces lanuginosus. Based on sequence
     similarity, they were classified as members of the known kinesin
     families Unc104/KIF1, KAR3, and BIMC. TLKIF1 was subsequently expressed
in
     Escherichia coli. The expression level was high, and the protein was
     mostly soluble, easy to purify, and enzymatically active. TLKIF1 is a
     monomeric kinesin motor, which in a gliding motility assay
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displays a robust [redacted]us-directed microtubule movement up to 2 microm/s. The discovery of TLKIF1 also demonstrates that a family of **kinesin** motors not previously found in fungi may in fact be used in this group of organisms.

PLEASE SEE "HELP USAGET[redacted]MS" FOR DETAILS.
COPYRIGHT (C) 2000 AME[redacted]N CHEMICAL SOCIETY (ACS)

=> s kinesin# and heave chain#

L1 0 KINESIN# AND HEAVE CHAIN#

=> s kinesin and heave chain

L2 0 KINESIN AND HEAVE CHAIN

=> s kinesin and heave chain

L3 0 KINESIN AND HEAVE CHAIN

=> s kinesin

L4 2493 KINESIN

=> s heavy chain and l4

L5 346 HEAVY CHAIN AND L4

=> s antibod? and l5

L6 114 ANTIBOD? AND L5

=> s polyclconal and l6

L7 0 POLYCLCONAL AND L6

=> s polyclonal and l6

L8 16 POLYCLONAL AND L6

=> dup rem l8

PROCESSING COMPLETED FOR L8
L9 8 DUP REM L8 (8 DUPLICATES REMOVED)

=> d l9 1-8 bib ab

L9 ANSWER 1 OF 8 MEDLINE DUPLICATE 1
AN 94299638 MEDLINE
DN 94299638
TI The Chlamydomonas FLA10 gene encodes a novel **kinesin**-homologous protein.
AU Walther Z; Vashishtha M; Hall J L
CS Rockefeller University, New York 10021..
NC GM17132 (NIGMS)
SO JOURNAL OF CELL BIOLOGY, (1994 Jul) 126 (1) 175-88.
Journal code: HMV. ISSN: 0021-9525.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
OS GENBANK-L33697
EM 199410
AB Many genes on the uni linkage group of Chlamydomonas affect the basal body/flagellar apparatus. Among these are five FLA genes, whose mutations cause temperature-sensitive defects in flagellar assembly. We present the molecular analysis of a gene which maps to fla10 and functionally rescues the fla10 phenotype. Nucleotide sequencing revealed that the gene encodes a **kinesin**-homologous protein, KHP1. The 87-kD predicted KHP1

protein, like **kinesin heavy chain**, has an amino-terminal motor domain, a central alpha-helical stalk, and a basic, globular carboxy-terminal tail. Comparison to other **kinesin** superfamily members indicated striking similarity (64% identity in motor domains) to a mouse gene, KIF3, expressed primarily in cerebellum. In synchronized cultures, the KHP1 mRNA accumulated after cell division, as did flagellar dynein mRNAs. KHP1 mRNA levels also increased following deflagellation. **Polyclonal antibodies** detected KHP1 protein in Western blots of purified flagella and axonemes. The protein was partially released from axonemes with ATP treatment, but not with AMP-PNP. Western blot analysis of axonemes from various motility mutants suggested that KHP1 is not a component of radial spokes, dynein arms, or the central pair complex. The quantity of KHP1 protein in axonemes of the mutant fla10-1 was markedly reduced, although no reduction was observed in two other uni linkage group mutants, fla9 and fla11. Furthermore, fla10-1 was rescued by transformation with KHP1 genomic DNA. These results indicate that KHP1 is the gene product of FLA10 and suggest a novel role for this **kinesin**-related protein in flagellar assembly and maintenance.

L9 ANSWER 2 OF 8 MEDLINE DUPLICATE 2
AN 94320152 MEDLINE
DN 94320152
TI Structural and biochemical properties of **kinesin heavy chain** associated with rat brain mitochondria.
AU Jellali A; Metz-Boutigue M H; Surgucheva I; Jancsik V; Schwartz C; Filliol D; Gelfand V I; Rendon A
CS INSERM, U338 Biologie de la Communication Cellulaire, Strasbourg, France..
SO CELL MOTILITY AND THE CYTOSKELETON, (1994) 28 (1) 79-93.
Journal code: CRD. ISSN: 0886-1544.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199411
AB **Kinesin**, a mechanochemical enzyme that translocates membranous organelles, was initially identified and purified from soluble extracts from vertebrate brains. However, immunocytochemical and morphological approaches have demonstrated that **kinesin** could be associated to intracellular membranous organelles. We used an **antibody** raised against the head portion of the Drosophila **kinesin heavy chain** to reveal the presence of this protein in membranous organelles from rat brain. By using differential centrifugation and immunoblotting we observed a 116 kDa protein that crossreacts with this **antibody** in microsomes, synaptic vesicles, and mitochondria. This protein could be extracted from mitochondria with low salt concentrations or ATP. The 116 kDa solubilized protein has been identified as conventional **kinesin** based on limited sequence analysis. We also show that a **polyclonal antibody** raised against mitochondria-associated **kinesin** recognizes soluble bovine brain **kinesin**. The soluble and mitochondrial membrane-associated kinesins show a different isoform pattern. These results are consistent with the idea that **kinesin** exists as multiple isoforms that might be differentially distributed within the cell. In addition digitonin fractionation of mitochondria combined with KI extraction revealed that **kinesin** is a peripheral protein, preferentially located in a cholesterol-free outer membrane domain; this domain has the features of contact points between the mitochondrial outer and inner membranes. The significance of these observations on the functional regulation of the mitochondria-associated **kinesin** is discussed.

L9 ANSWER 3 OF 8 MEDLINE DUPLICATE 3
AN 94273675 MEDLINE
DN 94273675
TI Intracellular distribution of **kinesin** in chromaffin cells.
AU Schmitz F; Wallis K T; Rho M; Drenckhahn D; Murphy D B
CS Institute of Anatomy, University of Wurzburg, Germany..
NC GM33171 (NIGMS)
GM45745 (NIGMS)
SO EUROPEAN JOURNAL OF CELL BIOLOGY, (1994 Feb) 63 (1) 77-83.
Journal code: EM7. ISSN: 0171-9335.
CY GERMANY: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199409
AB In this paper we examined the association of the microtubule motor protein
kinesin with organelles in chromaffin cells. Approximately 15% of **kinesin** was associated with membranes as determined by differential and equilibrium centrifugation on sucrose gradients. **Kinesin** was not enriched in a particular organelle fraction but cofractionated with a variety of organelle markers including markers for early and late endosomes, smooth and rough endoplasmic reticulum (ER) and the Golgi apparatus. Surprisingly, low amounts of **kinesin** were present in fractions of purified chromaffin granules. The absence of **kinesin** from the bulk of chromaffin granules was also indicated by immunostaining of tissue sections. A **polyclonal antibody** that specifically recognized the 120 kDa **kinesin heavy chain** labeled predominantly a perinuclear region that is typical for most of the **kinesin**-binding organelles identified by cell fractionation (endosomes, Golgi, ER). Since these organelles are compartments with high membrane turnover, we speculate that **kinesin** might be involved in certain aspects of trafficking of these membrane systems.

L9 ANSWER 4 OF 8 MEDLINE DUPLICATE 4
AN 94171927 MEDLINE
DN 94171927
TI **Kinesin**-like molecules involved in spindle formation.
AU Rodionov V I; Gelfand V I; Borisy G G
CS A. N. Belozersky Institute of Physico-Chemical Biology, Moscow State University, Russia..
NC GM 25062 (NIGMS)
SO JOURNAL OF CELL SCIENCE, (1993 Dec) 106 (Pt 4) 1179-88.
Journal code: HNK. ISSN: 0021-9533.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199406
AB To study the possible involvement of **kinesin**-like molecules in mitosis a **polyclonal antibody** against the head domain of Drosophila **kinesin heavy chain** (HD **antibody**) was microinjected into PtK1 cells at the prophase-prometaphase transition. Progress of the cell through mitosis was
recorded for subsequent detailed analysis. Cells injected with pre-immune IgG progressed through mitosis at rates similar to those for noninjected cells. After HD **antibody** injections, chromosomes failed to congress to an equatorial plane and cells failed to form a bipolar spindle. Rather, the spindle poles came together, resulting in a monopolar-like configuration with chromosomes arranged about the poles in a rosette. Sometimes the monopolar array moved to the margin of the cell in a way similar to anaphase B movement in normal cells. **Antibody** -injected cells progressed into the next cell cycle as evidenced by

chromosome decondensation and nuclear envelope reformation. Anti-tubulin immunofluorescence confirmed the presence of a radial monopolar array of microtubules in injected cells. HD **antibody** stained in a punctate pattern in interphase and the spindle region in mitotic PtK1 cells. The **antibody** also reacted with spindle fibers of isolated mitotic CHO spindles and with kinetochores of isolated CHO chromosomes. Immunoblotting indicated that the major component recognized by the **antibody** is the 120 kDa **kinesin heavy chain**. At higher protein loads the **antibody** recognized also a 34 kDa polypeptide in PtK1 cell extracts, a 135 kDa polypeptide in a preparation of CHO spindles and a 300 kDa polypeptide in a preparation of CHO mitotic chromosomes. We conclude that a **kinesin**-like molecule is important for the formation and/or maintenance of the structure of mitotic spindle.

L9 ANSWER 5 OF 8 MEDLINE DUPLICATE 5
AN 93326940 MEDLINE
DN 93326940
TI Rat pancreas **kinesin**: identification and potential binding to microtubules.
AU Malekzadeh-Hemmat K; Gendry P; Launay J F
CS Unite de Biologie Cellulaire et Physiopathologie Digestives, INSERM U.61, Strasbourg, France..
SO CELLULAR AND MOLECULAR BIOLOGY, (1993 May) 39 (3) 279-85.
Journal code: BNA.
CY France
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199310
AB We have demonstrated the presence of **kinesin** in the secretory pancreatic tissue using SDS-PAGE, immunoblot and immunoelectron microscopy techniques. **Polyclonal antibodies** were raised against the rat brain **kinesin heavy chain** and affinity-purified. Immunoblot studies showed that these **antibodies** were bound to a 116 kDa protein found in rat pancreas crude extracts and in partially purified **kinesin** fractions. **Kinesin** identification was also performed by a cosedimentation procedure based on its strong binding to microtubules in the presence of sodium fluoride. The microtubule-**kinesin** complex was observed by immunoelectron microscopy gold staining. The reversible association of **kinesin** with microtubules was generated by MgATP.

L9 ANSWER 6 OF 8 MEDLINE DUPLICATE 6
AN 92332608 MEDLINE
DN 92332608
TI Evidence for **kinesin**-related proteins in the mitotic apparatus using peptide **antibodies**.
AU Sawin K E; Mitchison T J; Wordeman L G
CS Department of Biochemistry and Biophysics, University of California, San Francisco 94143..
NC RO1-GM39565 (NIGMS)
SO JOURNAL OF CELL SCIENCE, (1992 Feb) 101 (Pt 2) 303-13.
Journal code: HNK. ISSN: 0021-9533.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199210
AB To identify **kinesin**-related proteins that may be important for mitotic function in embryonic and tissue culture cells we have generated **polyclonal antibodies** to two synthetic peptides corresponding to conserved regions of the **kinesin** motor domain.

In Xenopus eggs we have identified a family of microtubule-binding proteins, recogni[redacted] by one or both affinity-purifi[redacted] peptide **antibodies** but not by monoclonal **antibodies** that recognize conventional **kinesin heavy chain**. Like **kinesin**, most of these proteins bind to microtubules only upon addition of AMP-PNP or nucleotide depletion and are released upon subsequent addition of ATP. At least one protein, however, exhibits markedly distinct properties, binding readily to microtubules in the absence of AMP-PNP and/or nucleotide depletion. We also report that, unlike **antibodies** to conventional **kinesin**, the peptide **antibodies** to the **kinesin** motor domain immunofluorescently label spindles and kinetochores in mitotic tissue culture cells, suggesting that **kinesin**-like proteins may have important roles in chromosome movement and mitosis.

L9 ANSWER 7 OF 8 MEDLINE DUPLICATE 7
AN 91271311 MEDLINE
DN 91271311
TI **Kinesin** is responsible for centrifugal movement of pigment granules in melanophores.
AU Rodionov V I; Gyoeva F K; Gelfand V I
CS A. N. Belozersky Laboratory of Molecular Biology and Bioorganic Chemistry, Moscow State University, U.S.S.R..
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1991 Jun 1) 88 (11) 4956-60. Journal code: PV3. ISSN: 0027-8424.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199109
AB **Kinesin** is a mechanochemical ATPase that induces translocation of latex beads along microtubules and microtubule gliding on a glass surface. This protein is thought to be a motor for the movement of membranous organelles in cells. Recently Hollenbeck and Swanson [Hollenbeck, P. J. & Swanson, J. A. (1990) Nature (London) 346, 864-866] showed that **kinesin** is involved in the positioning of tubular lysosomes in macrophages. However, the role of this protein in the movement of organelles was not yet clear. We used a **polyclonal antibody** against the **kinesin heavy chain** that inhibited **kinesin**-dependent microtubule gliding in vitro to study the role of **kinesin** in the movement of pigment granules in melanophores of the teleost black tetra (Gymnocorymbus ternetzi). Microinjection of the **antibody** into cultured melanophores did not produce any specific effect on the aggregation of pigment granules in melanophores, but it did result in a strong dose-dependent inhibition of the dispersion. Immunoblotting of melanophore extracts showed that the **kinesin antibody** reacted in these cells with a single protein component with a molecular mass of 135 kDa. Thus, **kinesin** is responsible for the movement of pigment granules from the center to the periphery of the melanophore.

L9 ANSWER 8 OF 8 MEDLINE DUPLICATE 8
AN 90262692 MEDLINE
DN 90262692
TI Properties of **kinesin** isolated from human prostatic DU 145 tumor cells and bovine brain.
AU Stearns M E; Piazza G A
CS Department of Pharmacology, Fox Chase Cancer Center, Philadelphia, PA 19111.
NC CA45425 (NCI)
CA06927 (NCI)

SO BIOCHEMISTRY AND CELL BIOLOGY, (1990 Feb) 68 (2) 436-40.
Journal code: ALR[redacted]SSN: 0829-8211.
CY Canada
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199009
AB We have isolated and compared the 116-kilodalton (kDa) **kinesin heavy chain** from DU 145 human prostatic tumor cells and bovine brain. Comparative sodium dodecyl sulfate - polyacrylamide gel electrophoreses (SDS-PAGE), Western blots, and proteolytic digestion analysis all showed that the 116-kDa polypeptides from both sources were indistinguishable. **Polyclonal antibodies** raised against sea urchin **kinesin** cross-reacted with both brain and DU 145 **kinesin** on Western blots. SDS-PAGE and A-5m chromatographic studies indicated that **kinesin** forms a quarternary heteropolymer of approximately 400 kDa. DU 145 cells had three proteins of 116, 72, and 64 kDa forming the heteropolymer, in a 2:1:1 ratio, whereas brain cells appeared to have equimolar amounts of the 116-kDa **heavy chain** and a 64-kDa light chain.